THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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The Observer.---No. 4.

Practical agriculturists might derive much curious and profitable instruction, from the study of those insects which injure the products of their labor. To ascertain from whence the mischief comes, and how it is produced, is the first step towards the discovery of the means to prevent its occurrence, or to remedy its effects. Perhaps a few remarks on this subject will not be misplaced in the pages of the Cabinet.

Not being of the number of those seers (see-ers) who always see whatever they wish to see, I may not be able to relate the strange sights which they do;—such, for instance, as having seen the *eggs of the wheat fly on the grains*;—or having known a host of *weevils produced by the heating of grain in a bag*. These are things which I have not seen,—yet I am free to acknowledge, that they may have seen *some things* which I have not. I shall, therefore, pursue the unfashionable method of tracing nature, in her successive operations, to their final result;—rather than bolt right up to the conclusion, by trampling the premises under foot. This appears to be the more prudent course, for if it should be ultimately found, that the wheat fly does not lay its eggs on the grain,—or, if it should be proved that the weevil can only proceed from an egg, and that egg from a parent insect, I might be placed in a quandary to discover how the eggs came to be on the grain in the one case;—or, how the heat could produce the eggs in the other. It is prudent to sail with caution when there are breakers ahead.

Before attempting to trace the histories of particular insects, I shall make a few introductory remarks, for the purpose of explaining,

THE GENERAL HABITS OF INSECTS.

It is a singular circumstance in the history of the insect race, that they are destined during the transient period of their existence, to appear under three very different forms, viz: the larva, or caterpillar;—the chrysalis, nymph or pupa,—and the perfect insect. A knowledge of these several stages, or forms of insect life, is indispensable to an understanding of their history.

The silk worm affords a familiar instance of those great events which characterize the lives of most insects. The egg, now lying in my drawer, when the proper season arrives, will produce a *larva*, or caterpillar. After feeding for a few weeks, this worm will have completed its first period of existence, and must prepare for the coming change. Having found a convenient corner, it first spins itself up in a ball, or cocoon of silk. When its domicil is finished it soon changes to a pupa. The caterpillar, hitherto three inches long, strips off its skin, contracts into an oval form, about one-third of its former dimensions; the surface is now white, smooth, and soft, presenting very feeble traces of the included insect. The outside soon changes to a yellowish brown color, becomes more dry and resisting, and the surface is now figured with elevated lines, which mark the situation of the body and limbs of the more perfect animal, which is soon to be produced. In a word, the *chrysalis*, or *pupa* is completely formed. The pupa state continues from two to three weeks, when the *perfect insect* bursts the flimsy envelope, which had bound it, opens a passage through its silken tenement, and appears a perfect winged insect, or moth. In this state it does not eat. It moves only in quest of its mate. The only passion it feels, the only care it ex-

ercises, is, to provide itself with a successor —and, having done so, it dies.

The changes which I have described, are called the *metamorphosis or transformation of insects.* All insects, however, do not undergo these changes. Some of the *wingless species* retain through life, the form in which they issue from the egg. These are comparatively few in number. Others are hatched with all the parts of a perfect animal, except the wings. The pupa is distinguished from the larva, by mere rudiments of wings;—and these become fully developed in the more perfect state. Example: grasshoppers, locusts, &c. Insects of this sort are said to undergo a *demi-metamorphosis*, or half transformation.

I will close this essay with a few remarks on the different stages of insect life.

LARVA OF INSECTS.

As comparatively few insects feed their young, or even lay up food for their sustenance, they are instinctively led to deposit their eggs in situations, where the young animals will most easily procure food suited to their nature. The same instinctive care leads them to seek places, where the eggs will be protected against the destructive contingencies of the changing seasons. Thus, insects whose larvæ feed on particular plants, generally select those plants, as a deposit for their eggs. If the eggs are intended to hatch the present season, they are generally placed on the leaves of the plant. Example: the stinking bug which inhabits the squash and pumpkin. Others, which are intended to endure the winter in the egg state, are placed on more permanent parts. Example: the tent caterpillar, which infests our fruit trees. Its eggs are deposited in a dense cluster, around the extremity of a branch.

Numerous insects pass the larva state in the water. The eggs of these are deposited immediately in the water, or on plants, &c. along its margin. Example: the *musquitoe* and *dragon fly*.

Carrion flies deposit their eggs in putrid carcasses, the proper food for the maggot. Yet, even instinct may be beguiled by the senses. The carrion fly is often led, by the smell, to deposit its eggs in decaying mushrooms; and they may even be seen collected upon the stinking blossoms of the carrion flower, (*smilax herbacea.*)

The *bott fly* unerringly selects such parts of the horse as allow its eggs to be licked off by the animal,—whence, they find a ready passage into the stomach, where they complete the first period of their murderous existence.

Led by the same instinct, the *ichneumon fly* deposits its eggs in the body of a living caterpillar, which, after feeding the hungry parasites with its own body, falls at last, a prey to their voracity.

Many species of insects are only preserved during the winter, in the egg state.

PUPA OF INSECTS.

The insect having completed its larva state, seeks a situation to pass the next succeeding period, according to its peculiar nature. Many, especially those of the *moth tribe*, spin for themselves, a silken dormitory. Others, as the *larvæ of butterflies*, attach themselves to the side of a wall fence, &c. and pass into the pupa state without any other than their own proper covering.

Many larvæ bury themselves in the earth, where they form a cell adapted to their purpose. In some of these, the pupa state is of short continuance,—in others, it endures for the winter season. Of this last, the *tobacco worm* is an example.

Many species are only found during the winter season, in the pupa state.

PERFECT STATE.

The last state of insect existence,—the state of perfection,—the only state in which the being can reproduce its kind, like the preceding stages, is subject to great variety of duration. Some never eat in the perfect state; they only propagate and die. Others, feed for a time, but seem to have no other object in living, than to await the proper period of reproduction.

Many insects only survive the winter, in the perfect state.

There is, in general, much uniformity in the duration of the periods and changes of all the individuals of the same species.

The egg deposited in the fall, may hatch in the spring, pass its several periods during summer, and in turn, lay other eggs in the proper season. Example: *tent caterpillar.*

The egg deposited in summer, may hatch in the fall, pass the winter in the larva state, perfect its changes in the spring, and deposit its eggs the ensuing summer; these hatch, and the larvæ remain the next winter. Example: *peach insect.*

An insect having passed the winter in the pupa state, emerges in the spring, a perfect being,—deposits its eggs which hatch, perfect themselves, and in the fall pass into the pupa state to spend the ensuing winter. Example: *tobacco worm.*

The perfect insect may survive the winter; lay its eggs in the spring; these hatch, and pass their several changes during the summer, ready to pass the succeeding winter in the perfect state. Example, *wasps.*

Others, less regular in their changes, seem to pay no further regard to season, than what

severity compels them to do. At whatever stage of life, winter overtakes them, they still seem capable of its endurance.

Still others, whose periodical changes are of shorter duration, may reproduce their kind several times in the year.

New-Garden, 3d mo. 8th, 1837.

For the Farmers' Cabinet.

In the 14th No. of the Cabinet we have the figures of two or three kinds of stocks for shoeing oxen.

As the advantage of using oxen instead of horses on a farm, is now generally acknowledged, it is important that we should examine the best means to fit them for labor, as well as to give them comfort and ease while they are performing it.

There is something noble in the character of the ox, his peaceable and quiet disposition, his enduring patience, his generous exertions to the height of his strength in bearing along his heavy load through heat and cold, excites in us a friendly feeling towards him, and makes us wish to render his condition of servitude as easy as possible. Impressed with these feelings, and a desire to increase our agricultural interests, I have ventured to suggest some improvements in fitting and nailing on the shoes, and in the stocks that are here described.

In figure 59, two strong leather straps are represented to pass under the ox, "intended to prevent his laying down;" for those I would substitute two sacks, one under his belly and the other under the upper part of his hind leg; I have seen both kinds and think the sacks much preferable, particularly for the ease of the ox.

In shoeing, the plan recommended of useing broad nails is quite objectionable; it is much better to bend the head of the nail down to the surface of the shoe. The broad nails are liable to catch upon the stones, turn up, and then draw out; but if the head of the nail is small and sunk into the indented line called the swedging, they are out of the reach of any violence of this kind, for all the pressure comes on the smooth surface of the shoe.

"Turning up the shoe at the toe, between the hooves" is another objection.

When the ox is shod his shoes ought not to prevent his toes coming together in their natural way, but the forepart of the shoes ought to be about half an inch asunder when the toes are closed.

There should be two corkings worked upon each shoe, at right angles with each other; one at the toe parallel to the line of his traveling, and one at the heel across it; these assist him to maintain his standing in frosty weather. The shoe in all cases should be long enough to extend back under his heel, at least as far as any pressure comes upon the foot.

The hoof of an ox is very thin, compared with that of a horse, consequently the swedging or indented line should be near the outer edge of the shoe to prevent the nail from striking the vital parts of the foot.

Some people, through ignorance or inattention, work their oxen until they are lame, and then send them to the smith to be shod; in this condition the hooves are often so worn away, as to be unfit to receive the shoe; and when imperfectly put on they soon come off, and sometimes increase his lameness; all of which tend to discourage the practice of shoeing, and leaves the patient animal to be drove shoeless over rough roads, in suffering to himself, and loss to his owner. If shoeing in this condition of the foot is determined on, the shoe must be made to fit the foot, close around where it is nailed, as pearing and smoothing the foot is impracticable, and when the foot cannot be made to fit the shoe, the shoe must be made to fit the foot, but with all the care and art that is possible to apply; it is better in ordinary cases to turn them out to pasture, or to cease working them until nature has supplied them with a hoof sufficient to hold the shoe firmly to its place.

The ideas here suggested are drawn from experience; they are known by practical men to be improvements in the art of shoeing oxen, and if any one interested in the labor of this noble animal, should think an examination worthy his attention, he will no doubt conclude with the writer of this article, that the knowledge has well paid him for his time and trouble in collecting the facts, &c. Further, that the path to distinction as well as profit in agricultural pursuits, lies in making himself acquainted with every branch of his business, as well as watching the avenues of expense that drain off his "surplus revenue."

SUBSCRIBER.

Wilmington, Del., 3d mo. 10, 1837.

For the Farmers' Cabinet.

Farming.

It has been the prevailing custom with the farmers of New Jersey, for many years, to plough their sward for corn, that they might raise more than in tilling otherwise. I admit it is a good mode to till on the sward, and has always been allowed so by first rate farmers; but I find it greatly to my advantage to reverse the practice, in order to prevent the worm making such sad havoc in my corn fields. About six years ago I planted twenty acres on the sward, and out of that the worms took eight, scarcely leaving a hill to be seen. The tenth day of June I had it planted over again, thinking the worms would not disturb

it so late in the season, but still they preyed upon it, leaving about one half to grow. The next spring, I came to the conclusion to farm differently; instead of ploughing the sward, I ploughed up my stubble field, gave it a good harrowing, furrowed it out both ways, marled and manured every hill, and then planted the corn. In about a fortnight, I made a visit to the field for the express purpose to see if my corn had got up, or if the worms were taking it as they formerly had. I must acknowledge, that never since I have been a farmer, have I had my corn to come up as well; and I am fully satisfied, that it is the best manner to farm where we are harrassed with worms and other insects. Although the field which I farmed had two crops in succession; yet, notwithstanding, the third crop was much better, sounder corn, than I had raised for many years till I adopted this plan.

The manure I had left was considerable, after taking out enough to go over the corn field; and of the remaining part I made a compost, mixed with marl or lime, which make it much better for wheat than to put it on in separate bodies or portions.

The field that came in regular rotation to plant with corn, I ploughed up for wheat and rye. After the process of ploughing was over, I took a three horse harrow, gave it a thorough harrowing both ways, to make the furrows lay level, that the grass roots might rot. Before the usual time of sowing came on, I took what manure I had, put it on regularly, till it was gone. The part of the field which had no manure, I sowed in rye, and the part which was manured I sowed in wheat. Thus I have farmed for five years, with much better success than I ever did in the same length of time previously.

REMARK.

It is highly necessary to all agriculturists to plan and try for themselves, and if their plans should fail, then resort to the "Cabinet," for therein you can find various modes of treating your land and probably of a decided interest to you. I have tried many of my own plans; I get along much better; raise more off of the same quantity of ground, of a better quality and more suitable for the market. We, as farmers, must expect to be industrious, and not let our gardens and cornfields be overrun with noxious weeds to destroy and injure them, but keep them clean and neat, and we will reap the reward of our labor.

The time is fast approaching when American farmers shall surpass all others in the pursuit of agriculture. Husbandmen are looking ahead for the time when they shall attain a greater degree of science in their profession; so that they may cope with the Islands of Great Britain, and surpass the flourishing vineyards of France.

A FARMER.

Pemberton, N. J., March 10, 1837.

For the Farmers' Cabinet.

eply to A Subscriber.

BY OBSERVER.

I am gratified to find that my remarks on hollow horn, have been thought worthy of a critical review by one of the avowed advocates of the commonly received opinion, respecting that disease. This is as it should be; for so long as people continue to "hug up old errors, and love them better than new truths,"—so long ought they to stand upon their own feet, and defend the ground they occupy against every "innovation."

"A Subscriber," will please accept my thanks for introducing the symptom of *cold horn*. I assure him it was omitted quite unintentionally, when transcribing from Dr. Tofts. As a sign of hollow horn, however, it is perhaps of less value than what either Dr. Tofts, or "A Subscriber" have supposed. Observer did not "overlook the symptom; he was acquainted with the (reputed) fact"—but he does not yet know that it is a fact. It is believed that the horns of cattle present this symptom, independent of the existence of disease. The effect of inflammation is to increase, rather than diminish, the temperature of the part affected. Our sensations of temperature are liable to deceive us,—they are influenced by circumstances which are seldom taken into the account. Thus the shell of the horn being a slow conductor of heat, may possess a temperature very different from the interior, according to the state of the atmosphere. The quantity of heat eliminated in the horn, will be proportioned to the circulation of blood through it,—and this must depend in turn, on the mass of bony matter, to be nourished. Hence, if the hollow in the pith is very large, and the bone consequently thin, less blood will be admitted into the horn, and less heat will be evolved than under the reverse circumstances. We only judge of the temperature of the horn, by comparing it with that of the hand. The same horn may, therefore, feel either hot or cold, in various degrees, depending on the condition of the hand at the time. Even opinion is at variance on the temperature of hollow horns. I have been told by *practical men*, that they are as often too hot, as too cold. "A Subscriber" says, "it cannot be supposed the author knows that death would be in all cases, the immediate result of suspended circulation of blood in the horn." Strange as this supposition may seem to him, it is nevertheless true. Observer does know that when the blood ceases to circulate, death *must*

ensue. He moreover knows, that the blood which circulates through the horn, *must be warm blood*,—that it *must impart warmth* to the parts through which it passes,—or if the external cold is so great as to prevent this warmth, the *blood must cease to circulate*, and the part *must* die. Therefore, if the horn becomes cold, it *must* become dead, and when dead, it *must* exfoliate, and drop off.

"A Subscriber" will of course demur to all this, by saying that as the pith wastes, the circulation is diminished, and consequently the temperature is reduced. For he says "we understand the hollow horn, according to Dr. Willich, to be a disease, which gradually wastes the internal substance of the horn, commonly called the pith." This frank avowal of his creed, brings us at once to the very *pith* of the controversy—*does the pith of the horn waste—yea or nay?* I have said in a former number, that "such a wasting of the pith does not take place;—I challenge those who think otherwise to produce the horn, so wasted." "A Subscriber" says "I am in a situation to see thousands of horns extracted from the hides of cattle annually, five per cent. of which I would say, are said to be from cattle dying of hollow horn." Five per cent. on the smallest number, (2,000) would give *one hundred hollow horns*, brought under his inspection every year. Possessing such ample materials, why does he not accept my challenge,—why does he not immediately produce the horn;—yea a hundred horns in support of his opinion?—If he possessed such a horn, would he not have produced it? If he had ever seen such a horn, would he not have told us? His failure to do so "indicates more *speculation*, than *knowledge of facts*," and leads me to suppose that in younger life, he may have formed his "opinion with less evidence, than what was required by Thomas of old." He however, says, "I ask him (Observer) to look at the horn he has described under the head of Putrid Horn, &c." And then adds, "here is an admission of all that is necessary. If inflammation produces bony ulceration or caries, the discharge will, of course, be the substance which constituted the inside of the horn. If this bony substance or pith, becomes rotten, (which is the definition of caries) and is discharged, the pith is then out of the horn, and not in it, and consequently the horn is hollow in the sense in which we understand the question. Here, "A Subscriber," "labors very ingeniously," to make an "admission of all that is necessary," *for me*. *But* I cannot admit such an admission. I have not said,—nor do I believe that inflammation of the membranes, lining the cavities of the head and horns, does produce bony ulceration. The horn is liable to caries, in common with all other bony structures, but I have yet to learn that it is more so than other spongy bones. Aware that inflammation may sometimes extend to the subjacent bone, and even produce caries, I used the language which "A Subscriber" has quoted;—"If (i. e. give, grant, allow, or admit the fact that) the inflammation assumes a more violent form, and extends to the bones, producing bony ulceration," &c. But I do not admit the fact, because I have never seen it do so,—because I have not found a well authenticated instance, among my friends where it has done so,—and because the wide field of "A Subscriber's," observations does not appear to have furnished a single case of the kind.

The question, at last, can only be settled by an examination of the horns, and on the evidence which they afford. What then would be the appearances of caries or ulceration of the pith?—If the pith was *entirely wasted*, the horn having lost its support, would either fall off spontaneously, or hang dangling by its attachment to the skin. In this case there could be no mistake.—It would afford "A Subscriber" a full opportunity of "seeing, feeling, and knowing that the fact is so." But has he, or any other person ever met with such a case?—Has he met with one such instance, out of the multitude of his observations?—As such extreme cases may be somewhat rare, I will consider the disease, in its earlier stage, when the pith is only *partially wasted*. It would appear from the expression used by Dr. Tofts, that the wasting commences at the tip, and progresses toward the root. Hence at any stage of its progress, we might expect to find more or less of the end of the pith wanting, and the *stump* would put on the appearance of a carious bone. Instead of a smooth, even surface, covered by the periosteum, it would present a naked, irregular, ragged, spongy face, of a dark color, and emitting a putrid smell. Or if any should look into the cavity of the pith, for the seat of the ulceration, they would find the same general appearances there,—for they attend all ulcers in bones. Will "A Subscriber" be kind enough to inform us how many *such piths* he has seen, during the (twenty) years of his experience?—As he has not given a single "fact" to support his "speculations," I will again put the question;—what *tanner* ever found a horn from which the pith was *either partially, or entirely wasted* in the manner described?

I rejoice that one who possesses such ample means, has resolved to "examine the subject in future, more practically, and transmit the result of his investigations to the Cabinet." And if he will cease to "hug up old errors, and love them better than new truths,"—if he will lay aside his "speculations" and seek only a "knowledge of facts," he will soon

obtain the conclusive evidence of "seeing, feeling, and knowing,"—and will consequently believe that the "hollow horn, (or a disease attended with a wasting of the pith of the horn,) has no existence in nature."

New Garden, 3d mo. 8th, 1837.

P. S.—Since my second number was written, several persons have related to me, instances of cattle dying from *reputed hollow horn*, in which a high degree of disease was found to exist in the *many-plus*, and contiguous organs. I would again call the attention of my readers to observations of this kind, when their cattle die of *hollow horn*.

Agricultural Implements.

NO. II.

THE HARROW.

To the Editor of the Farmers' Cabinet.

Sir,—As there are some improvements in this implement, which possibly may not be known to all the readers of your paper, I take the liberty of forwarding a description of them.

The object for which a *Harrow* is used is to pulverize the earth, and destroy such growth of vegetable substances as may be injurious to those which we wish to bring to perfection, and to effect this the form, &c. to suit different kinds of soil and surface, require some variation. They are all, however, reduced to two principal kinds, viz. those with pointed teeth, and those with edges or cutters at the lower extremities. The latter sometimes called a *Cultivator*.

In order to have one of the former kind to operate well on rough land, the frame which holds the teeth, should be constructed with hinges in a line with the draft, (or motion,) when in operation, so that the different parts will change in relation to each other: this will allow a greater number of teeth to act on the ground, than where the relative parts are fixed; what the width of those relative parts that change their position with each other should be, will depend upon circumstances; perhaps upon most land one foot would be a good width. The anterior, and posterior corners should each have a staple for the team to be attached, so that either corner may go in advance; this will keep the lower extremities of the teeth in a better form, than when drawn only by one corner. The other kind of teeth (*cultivator*,) with an edge at the lower extremity of each should always be made as thin as possible, consistent with the necessary strength. The form of the part that goes into the ground, should ascend from a horizontal to a vertical direction; or other convenient part of a cycloidal curve, and the anterior part be an angle, say from thirty to forty-five degrees, or any other angle most convenient and useful. The parts from the anterior to the posterior extremities, should be perfectly straight horizontally, and the anterior angle should be a cycloidal curve, or line of quickest descent from the highest to the lowest point. The parts above the ground should be made in size, &c. to correspond with the force of team to be applied, and confined to the frame by keys or nuts, as may be most convenient. Teeth of this form, with a hole* through the centre of each, in the part above the ground, for grain to descend through, may be used for drilling. These teeth are sometimes composed of cast iron, at other times of wrought iron and steel. One of the last mentioned teeth, can be used when ploughing to stir the earth in the bottom of each furrow, so as to deepen the soil, without the risk of injury that would in many cases arise from bringing a poor soil to the surface. This tooth may be attached to a piece of wood, and the wood bolted to the plough beam, so as to bring the tooth into the furrow made previously; or into the furrow immediately behind the plough, or it may be attached to a beam with handles and a separate (or other) team used.

Chester Co., Pa., 4th March, 1837.

Composition for Boots and Shoes.

(Communicated.)

One part bees-wax, and two parts tallow, melted together and put upon the leather, about as warm as a person can bear the finger in it, and dried in as near a fire as a person can bear the hand. After it is dried in, the leather may receive blacking in the usual way until the process is again renewed, and so on as long as the shoes or boots are exposed to wet. Experience will direct how often the composition should be renewed; perhaps once a week will be found in ordinary exposure sufficient.

For the Farmers' Cabinet.

As I have never seen the following statement in print, perhaps you may think it worthy a place in your useful paper. It was, formerly, the custom in New Jersey, in raising the sweet potatoe, to take the potatoe out of the hot-bed, and cut it up with a sprout on each piece, consequently the hot-bed was finished with the setting out. On one occasion, an old hog got into a patch and rooted up every hill, and ate the pieces of the potatoes; the owner considered his crop lost, but thinking that some few might

* A tube of a proper size, to pass from the hopper that holds the grain down through the frame, a sufficient distance, so as to discharge the grain immediately behind the tooth, will answer instead of a hole through the tooth.

grow, he replanted the sprouts, and to his surprise they all grew. Next year a few more were tried, they grew also. And now, sir, when the sprouts are fit to set, they are taken off without disturbing the potatoe, and in the course of ten or twelve days, there is a second crop of sprouts ready, after that a third, often in time to plant for the crop.

Darby, Pa. March 7, 1837. D. R.

From the Farmers' Register.

The Proper Distances for Planting Corn.

I hold it to be an axiom, that any subscriber to a useful and punctual periodical, who does not contribute to its support, by paying his subscription, and furnishing any useful facts or theories of which he is in possession, is worthy of any punishment which a jury of editors would inflict.

Not choosing to subject myself any longer to the penalty due to such an offender, I send you my subscription and my mite of matter. The first will, I hope, justify you in paying the post, whether the latter is worth printing or not.

In this world of fancies and Yankee notions, each man has his hobby. Some ride to the south, some glide swiftly on the bosom of the smooth canal; some fly through the air in balloons; some rattle on a railroad, and I, Mr. Editor, ride into my cornfield, and speculate on the value, while I am enraptured by the beauty of that queen of plants.

While all the world is agog for cotton, the poor corn is neglected by all but those who eat it. Let us turn our eyes to it, while I give you the results of some experiments and calculations on its culture.

On the Eastern Shore of Virginia (that most prosperous of all corn countries,) I am told it is the habit of the planters to plant their corn four feet each way—a single stalk at a place. When I first commenced farming, my impression was, that the most economical method of cultivating corn, all things considered, was to plan it so as to plough it both ways, and thereby dispense with the hoe-work. I tried it. Experience and reason have changed my opinion. In 1835, I cultivated a light sandy field in corn, (much such land as that on the Eastern Shore, but not so good.) Part of it I planted 5 by 3, and part (the best land) 4 by 4 feet—both were ploughed both ways, and received the same culture: the cut 4 by 4 was favored rather the most, because it seemed to suffer. The result was, the corn 4 by 4, suffered for instance, while that 5 by 3, had a plenty of room, and was a good crop. This set me to thinking—and the result of my cogitations amounted to the conclusion, that corn must have a plenty of distance one way; else why was the corn 4 by 4 too thick, while that 5 by 3 had distance enough—when there were more stalks on an acre of the latter, than on one of the former—which reminds me, that many persons, and they intelligent and educated farmers too, think—no, conclude without thinking—that because 4 and 4, and 5 and 3, and 5½ and 2½, 6 and 2, and so on when severally added, make 8—that, therefore, there are the same number of stalks on an acre, planted in either way.

This you know is not the fact—on the contrary, the number of stalks is inversely as the *product* of the two numbers. For instance, the number of stalks on an acre 4 by 4, is to the number on an acre 6 by 2, as 12 is to 16. The reason is this—more land can be contained in a square, than in any other rectangular figure—consequently, there are fewer squares in an acre, than there are of any other rectangular figure—so, also, the nearer these figures approach to a square, or the farther they are removed from one, the less, or the greater is their number.*

This important consideration, together with the fact above stated, resolved me to cultivate my corn this year on a different plan.

I accordingly planted it 5½ feet one way, and 1½ to 2½ feet the other, according to the quality of the land. My corn was as good, and better, worked in this way, and I cultivated it with little trouble. By using an X wooden drag, twice in a row, about a week after each ploughing—first, when the grass begins to spring, you leave your land as level and keep it as clean, as you can by cultivating it in any other way—hoe or no hoe. Moreover, the greater the distance one way, the less your corn will be ridged by ploughing; and, therefore, the more dirt you can throw immediately around it without injury. If I am wrong in any of my deductions, I hope you, or some experienced corn planter, will put me right: for, until experience or reason changes my views, I will plant my land 6 by 2, which, according to old style, would be planted 4 by 4. There are ⅓ more stalks on an acre of the former, than on one of the latter. I contend the last is the thickest. In the mean time,

I am, yours, &c.

SIX AND TWO.

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*The proper and simple rule for comparing spaces, or distance of plants, is to multiply the length and breadth together, and thus ascertain the number of square feet given to each plant, or station. Thus 4 by 4 feet, makes 16 square feet, and 6 by 2, 12 feet only. Yet simple and obvious as is this truth, it is both true and surprising, (as stated by your correspondent,) that many old and experienced corn planters still compare the spaces, afforded by these and other different distances, by adding, instead of multiplying the length and breadth together.—Ed.

(From the Ohio Farmer.)

Location, Soil and Cultivation of the Madder Crop.

A location facing the south or south-east is to be preferred. A sandy loam not over stiff and heavy, or light and sandy, or a good brown, deep, rich upland loam, free from foul grass, weeds, stones or stumps of trees. Where a crop of potatoes, peas, corn or wheat, has been cultivated the past season, plough deep twice, once in September and once in October, and if rather stiff let it lie after the plough until spring. When the spring opens, and the ground has become dry and warm, (say in Tennessee, 1st of April, Ohio 15th, and New York, 25th to 1st of May; I speak of the spring of 1836.) Plough again deep, the deeper the better, then harrow well and strike it into ridges with a one horse plough, three feet wide, and four feet vacant, or making a ridge once in seven feet, raising it, if on rather moist ground, eight or ten inches, and dry land six or eight from the natural level, then with a light harrow level, and shape the ridges like a well formed bed of beets, &c.

We will suppose you intend to plant one acre of ground, and that you have purchased 8 bushels of top roots in the fall and buried them like potatoes on your premises—count the ridges on your acre, and take out of the ground, one bushel of roots, and plant it on 1-8 of your ridges; you will then be able to ascertain how to proportion your roots for the remainder.

The following is the manner of planting, cultivating, &c., when the quantities of ground do not exceed three or four acres. One person on each side of the ridge to make the holes, (plant four inches below the surface of the bed, or there-abouts, when covered,) one on each side to drop the roots, and one on each side to cover, pressing the hill like that of planting corn, or three persons on one side, as the case may be, whether you have one or more acres to plant. Let the owner be the dropper of roots, and his most thorough assistances behind him. Make the holes from twelve to eighteen inches apart, and about six inches from the edge of the ridge. As the plants are supposed to have been purchased in the fall, the roots may have thrown out sprouts, and possibly have leaved. In this case, in dropping and covering, you will leave the most prominent sprout or sprouts a little out of the ground, as where a plant has leafed, it ought not to be smothered.

When the plant gets up three or four inches, weed with the hoe, and plough with one horse, between the ridges or beds, but not on them; this will take place 2 or 3 weeks after planting. When up 12 or 15 inches, many of the tops will fall; assist them with a ten foot pole; two persons cross them each way across the bed, cover them with a shovel or garden rake, throwing the soil from between the ridges.—After loosening with the one horse plough, you will, with a shovel scatter the earth between the stalks rather than throw it into heaps; of course we wish to keep the stalks separate, as they are to form new and important roots in the centre of the beds. About the 20th of June, you may plough between the beds, and scatter more earth on the fresh, tops, (all but the ends) and when you get through, you may plant potatoes between the beds if you choose. I do not recommend it, if you have plenty of land, although I raised 1070 bushels Pink Eyes on eight acres the first year, and 60 bushels of corn. If your land is perfectly clear of weeds, you are through with your labor on the Madder crop for this year, except in latitudes where there is not much snow, and considerable frost; in this case cover in October two inches or thereabout. 2d year; same operations in weeding, but no crop between; cover once in June. 3d year; weed only; 4th year: weed in the spring, if a weedy piece of ground.

Begin to plough out the roots in Tennessee, [3 years old] first Sept. Ohio [4 years] same time. New York, 15th or 20th, after cutting off the tops with a sharp hoe. In ploughing out the roots use a heavy span of horses, and a large plough. We ought to choose a soil neither too wet or too dry, too stiff or light. Shake the dirt from the roots, and rinse or wash, as the soil may be, stiff or light; dry in a common hop kiln; grind them in a mill after Wilson's Patent Coffee Mill; this mill weighs from one to two pounds. The madder mill may be from 60 to 80 lbs. weight. Grind coarse, and fan in a fanning mill; then grind again for market. The profit of this crop is immense; the exhaustion of soil trifling, and glutting the market out of the question.

The Editor of the Albany Cultivator, vol. 2, page 20, says—"It is principally cultivated in Holland the province of Zealand; being literally covered with it, from whence it is exported to every part of Europe and America, yielding almost incalculable profits. The import of this article for the use of our manufacturers, is said to amount in value, to more than two millions of dollars annually." Mr. Jefferson, while minister in France, writes: "They cultivate madder here at immense profits; they dig it once in five or six years." I have before me a communication from a cultivator of the article, (see Cultivator, vol. 2, page 93,) who makes the clear profit to amount to $888 30, on an acre once in four years. The lowest amount of profit that I have known on an acre in four years is $200.

the highest 1200; this last included the sale of top roots for planting. The amount will vary according to the soil and cultivation. I have unquestionable evidence that one hill (2400 to the acre) has produced in five years, 4 lbs. of kiln dried madder; another at five years old, 6 lbs. another wherein they took uncommon pains with the hill, 8 lbs. 8 oz. Mr. Woodbury, of Winfield, Herkimer county, N. Y., the writer of the above mentioned communication, purchased in the fall of 1834, one-fifth of an acre of madder 4 years old and planted in hills, (far less productive than if planted in ridges) for which he paid $80, and dug from it one thousand one hundred pounds. After it was kiln dried, he sold it for 18 cents the pound. The usual yield for four years is 3 pounds to the hill, where the land is first rate, and the cultivation is performed by a snug farmer. The crop increases something like the following ratio, viz. 1st year, small growth. 2d, double. 3d, equal to the two first. 4th, equal to 15 per cent. on the whole; at least this is my opinion, not having dug any that was five years old. Madder grows, and the stalks are fresh, in any of the middle and western States until killed by a hard frost, and is almost the first vegetable that starts in the spring, hence I should suppose that madder in Tennessee, at 3 years old, would be equal to four years at Birmingham, Ohio; four and a half, Oneida county, New York; five years Winthrop, Me. The cultivators of Holland and France, from whom we draw most of our supplies, and most of the agricultural authors of those countries, have been silent on the subject.

I am located in the rich bottoms of the Vermillion river. I, in connection with another person, plant this spring 10 or 12 acres. As I have always been of the opinion that a madder soil should be composed in a great degree of decayed vegetables, I think I shall get in four years from 5 to 6000 lbs. of dried Madder per acre. I have a good upland 1 1-2 acres, planted some time since, from which I can spare enough roots next fall, to plant 6 or 7 acres. The price will be, in the fall, for 6 bushels, $24; over 6 and under 12, $3 50 per bushel; over 12, $3.

Birmingham is 38 miles west from Cleveland, Ohio, and 14 miles south-east from Huron, Ohio. Messrs. Wickham and Co., Forwarding Merchants, Huron, will be applicant's agents, to whom funds may be forwarded for the purchase of roots; P. E. and E. B. Bronson, Birmingham, owners, or R. Bronson, Manager. All letters on the subject must be post paid to meet with attention.

I had been in the practice of using the 'Rubin Tinctorum, or Dyer's Madder,' for many years previous to embarking in the business; and before I commenced, I ascertained that the price of the imported article was worth (the preceding thirteen years, on an average, in the New York market.) 15 cents per lb.; the ten years preceding the thirteen years, it was worth 25 cents, and in that time have known it worth 44 cents. In my early communications to Editors of agricultural papers, I stated the crop would equal 2000 lbs. 3 years old, but did not dream that 4 years would produce an average of 4000 lbs. on good land and good culture. The cost does not exceed 4 1-2 cts. per lb., exclusive of selling top roots for planting. They may be sold with profit at three years and even two years old.

It is surprising to me that no more than sixty acres is as yet under cultivation. There will be about one hundred acres planted this spring, and from forty-five thousand to seventy-five thousand acres wanted for the consumption of the United States: And England, as she cannot grow the article, imports all she uses. I say she cannot grow it to advantage; her summers are too moist and cool. It is more absurd to let foreign nations export madder to this country, than to let them export wheat or wheat flour. It is more hardy than the potatoe crop. It is worth three cents more per pound, than the best imported. As a proof, no imported madder can be sold where this has been kept for sale. The difference consists in this, that the brightest roots are selected in the field in those countries, dried and ground, and sent to England. They use it in dyeing their Adrianople, or Turkey red, on cotton; the rest dried, (without rinsing,) ground, and sent to America. In this country, a prudent cultivator rinses, dries, and grinds altogether; then fans or separates the loose bark and small fibres from the pure article. The refuse is used for ground of many colors.

Madder is used in whole, or part, for the following colors on wool, both in England, France, and America, viz: blue, black, red, buff, olive-brown, olive, navy-blue, and many others; finally it produces one of the most beautiful, durable, and healthy colors that is at this time dyed; as for calico printers, it enters greatly into their dyes. The city of Lowell, in Massachusetts, uses thirty thousand dollars worth per year. A war with France would raise the article to thirty one cents per lb. in the New York market. One small establishment in Otsego County, New York, uses equal, each year, to three-fourths of all that is raised in the Northern States at this time.

The reader will now inqure why have not the farmers in the United States, entered into the culture of this article, and completely glutted the market? I will answer, that most of them want their profit at the expiration of each year, not thinking that the horse

or ox is four years old before it is profitable to sell. But there is another difficulty. I have before observed that there was wanting, for the consumption in the United States, from 45 to 75,000 acres. The amount of Madder roots, for planting, dug last fall, was 1000 bushels. There will be planted this spring, say something more than 100 acres; next fall there will be for sale, roots amounting to 250 bushels, and next year, enough to plant 200 acres. Probably it will take ten years or more, to procure a supply of roots to plant, equal to the consumption of 1835—6 or 7. I have before me a communication from a respectable correspondent, detailing the mode of cultivation in Holland and France, together with queries, requesting my answers, which I will most cheerfully give, and which will be forwarded to be inserted in your paper, should you deem the above worthy of publication.

I have, for many years past, believed that the soil and climate of Ohio, was peculiarly favorable to the culture of silk, madder, and the grape for making wine; and having resided here in course of the last and present years, several months, I have been more and more confirmed in that opinion. What hinders this State from rising in rank above New York? Let every farmer take an agricultural paper, and improve the privileges that nature has given them. I have examined the soil and privileges of this country in particular, and do not hesitate to say, I believe that it equals any part of the United States. There is, I believe, no desirable fruit or grain that grows north of Philadelphia, but what flourishes here. It is certainly a most desirable soil and climate, compared with that of the middle counties of New York. Many of the farmers of this section, only skim the surface of the land with the plough. What hinders the water, in the spring and fall, from settling in the ground through the sub soil, and bursting out in springs?——Shallow ploughing. What hinders the farmer from obtaining thirty bushels of wheat to the acre?——Shallow ploughing. I wish I were able to commit to paper all I feel in favor of manual labor, or agricultural schools, backed by numerous agricultural papers, containing communications from a Buel, a Colman, and a host of other scientific and practical farmers. I am not a practical farmer, in a large way, myself, but the aid I have received from perusing those papers, for a few years past, has been of great benefit to me—yes, ten times the expense of four agricultural papers per year.

Not being brought up on a farm, how could I exercise judgment in the selection of a horse, ox, sheep, or hog? I read the communications of writers of acknowledged reputation, on the subject, and compared their arguments with my own reason, improved by previous reading, and made my choice. How should I be able to select and cultivate the various grains and grasses, or to till the ground to a proper rotation of crops, or select and engraft with my own hands the best fruits in the country, and last, though not least, to have a good garden?

I might go on and multiply reasons why I will patronize agricultural papers; but knowing my inability to do justice to the subject, and fearing your readers will think I am fishing for some particular individual, I will conclude with wishing you and your brethren in the cause, many subscribers, and that you will consider me one of them.

R. BRONSON.

Birmingham, Huron County, Ohio.

To the Editor of the Farmers' Cabinet.

Peach Trees.

Sir,—I have observed several communications in your paper, relative to the *Peach Tree*, recommending certain processes for preserving this valuable tree from premature decay. There is one cause of destruction which I have not observed in any of them.

In this country the severe winters have sometimes acted so powerfully on the body of the *Peach Tree*, as to destroy it; which has induced some persons to enclose the whole body of the tree, during the winter season in straw. This is done by placing the straw with the but end on the ground, and extending it upwards to the first branches; the whole is then confined firmly around the tree by bands of straw, or strings, suitable for that purpose.

I have heard of no trees being destroyed by the winter, which have been treated in this manner.

Three or four quarts of unslacked wood ashes, placed around the tree at the ground extending upwards, as far as possible against the body of the tree, and after this from half a bushel, to a bushel of washed (or clean) sharp sand, placed over the ashes, and on the ground around it, and also extending up the body of the tree as far as possible, has been found to be an excellent process to prevent the destruction of this tree by the worm, and at the same time increase the growth of it: The sand seems to prevent any space around the tree, sufficient for the insect to deposit its eggs at the root, which would otherwise, (in common soil) be produced by the action of the wind on the tree. The sand also admits more moisture from rains, probably than would be admitted by most other substances, placed to the same height against the body of the tree. The caustic quality of the ley, produced by moisture from rains, passing

through the ashes, probably destroys such worms as may be in the root, when placed there, or which may afterwards come into life. The fertilizing qualities of the ashes, may also be as useful to increase the growth of this tree, as of other vegetable substances.

Yours, respectfully, P.

Chester County Pa., 16th March, 1837.

For the Farmers' Cabinet.

I have heard complaints frequently made, that brick walls of buildings, were inferior to wood, on account of dampness in the interior of the buildings, caused by the rains beating against the walls.

An excellent plan to guard against this, is to build the walls principally hollow; this is effected by leaving a space between the outer and inner courses of about one inch, or other convenient thickness, and strengthening the wall by extending a brick from one part to the other, about every square yard, or other convenient space. An aperture, which can be closed at pleasure, may be made from each apartment in a house, by which means the temperature of each apartment may be increased or diminished by opening and closing these, and thereby benefit one, by the superfluous heat of another, where it would otherwise be lost.

All the apartments in a house may also be heated in this manner, from one fire in the basement story or other convenient place.

Yours respectfully, Z.

Chester co., Pa., March 22d, 1837.

Note. The ground (or cellar) floor of a building should be composed of cement, consisting of lime and sand, or other suitable substance, to guard against rats and mice; and the upper (or garret) floor should also be composed of a suitable cement, laid on lathes to guard against fire, which may originate in the roof, where that is composed of wood. Care should be observed to have the lathes narrow, and placed so as to permit the cement to enter between them, otherwise it will be difficult to prevent the cement from leaving them. Inferior boards, one inch thick, which are frequently useless for other purposes, sawed into lathes answers for this purpose.

[The following valuable article we cut from a New York paper, about a year since. If we are not mistaken, it originally appeared in the American Farmer.]

Work for April—on the Farm.

OATS.

This forms, as it rightly ought, a part of the husbandry of every good farmer; for notwithstanding the hue-and-cry that is raised against it on the score of its *robbing* the ground, and being a great *exhauster*, we maintain that every man who would desire to keep his horses, and especially his riding and carriage horses in *sound* flesh—who desires that the capacity for quick travel and endurance of fatigue should be imparted to them, should frequently feed them with oats, and the straw when cut and mixed with meal or chopped-rye, makes not only an acceptable food but one highly nutritious. In the preparation of the ground, it should be generously manured, ploughed well, and harrowed finely. Sow three bushels to the acre, harrow in, and as soon as the oats are two or three inches high, sow a bushel of plaster to the acre. The sooner the oats are sown the better. If you have not already sown your clover seed you may do so with your oats.

CORN.

It is presumed that all your more stiff corn ground was ploughed up last fall or early in the winter; if so, it is superfluous to apprise you that the time is at hand to break it up, and it will only be necessary to tell you to list it for planting; but such as may not have been so fortunate as to be in that situation, must break the ground forthwith, and prepare the soil for the corn crop. If the soil be a tenacious clay, deep and repeated ploughing and harrowing will be requisite; barn-yard or stable manure should be applied just before the last ploughing, so as to be brought immediately in contact with the roots of the plants, and thus impart to them nourishment at the earliest stage of their vegetating: the furrows should be three feet apart, and listed at the same distance, so as that the corn would stand three feet asunder each way. Before planting the corn, soak it in a strong solution of saltpetre and sulphur, for 12 hours, then drain and roll the grains in plaster of paris. Some prefer to pass them through a mixture of tar and fish oil before applying the plaster. If tar be used we should prefer the gas tar, which from its offensive aroma would, we are sure, prove very repulsive to grub-worms, as also to crows and blackbirds. If the common tar be used we are certain that Seneca oil would be found much more noxious than fish oil. Drop eight grains of corn into each listing, throw a *pint* of ashes over them, then cover up; when the plants are up, put a spoonful of plaster on each hill, so as to shove them forward beyond the ravages of the cut-worm, a thing always desirable; but particularly so if your ground was not thrown into fallow the previous autumn or winter.

If your proposed corn land is a clover-ley, and was not ploughed up last fall, it would be well to put a light covering of lime on it to promote the decomposition of the tap and lateral roots, if it be but five bushels to the acre you will find infinite advantage to result from it. At all events your clover-ley should be ploughed several days before planting, so as to let the active fermentation which always follows the turning in of large bodies of vege-

table matter, subside somewhat before you put in your corn.

After your corn plants have assumed sufficient size to exempt them from further danger from the grub-worms, thin them out so as to leave but four plants in a hill.

If the ground to be put in corn be sand or sandy loam, it may not be necessary to subject it to such thorough ploughing, but even in such soil, I would plough much deeper than fashion has prescribed; for I hold the crown of the substratum in no reverence whatever, believing that the dread of breaking it, which generally prevails, to be a dangerous fallacy, and to have no foundation in common sense.

A word or two as to *seed corn*. In all close planting, it has been recently suggested by a highly prized correspondent from Virginia, that the *northern corn would answer best*; we coincide with him in opinion, and should be happy in seeing it introduced into culture, in the whole of what may emphatically be called the corn region of our country.

As to the *after culture*, it is almost impossible to prescribe any thing like a rule of universal application; the great object should be to keep the soil stirred and the plants clear from weeds; the cultivator may under certain circumstances be advantageously passed through the corn, three and four times, but this practice is to be governed altogether by the state of the soil and season.

To prevent crows and other birds from disturbing your corn when newly planted, it is recommended to soak a sufficient quantity in a solution of *nux vomica*, or *arsenic*, and strew it about the cornfield; but we confess we have no taste for such insidious modes of warfare; the exhibition of poison, whether to man, the proud tryant of the earth, to the beasts of the field, or the birds of the air, always has been, is *now*, and we trust *ever will be*, abhorrent to our nature. If the birds must be destroyed, shoot them; let them die the death of the brave.

As you have probably not planted your early *potatoes*, you should lose no time in doing so now: your long manure should be used in the row or hill, whether planted the one way or the other, as besides being the most economical mode of applying it, it is decidedly best calculated to promote the prolific growth of this vegetable.

While you are planting your early crop, put in a few bushels of seed *extra* to be fed boiled to your milch cows and hogs, they will come in at a period of the summer when green food is mostly scarce. About 27 inches is a good distance for either row or hill culture.

Spring Grain.—As soon as the ground is sufficiently dry you should sow *Barley*, *Spring Rye*, and *Spring Wheat*.

PARSNEPS, CARROTS, AND BEETS.

You should sow your early crop of either of these delightful roots as early this month as possible. The best-kind of ground for each is a rich loam inclining to sand; but if the ground be well and thoroughly manured, ploughed deep, and pulverized finely, they will grow in any soil. No farmer should omit sowing them, if for nothing else, as food for his cattle. They tend greatly to improve the quantity and quality of both milk and butter, and are highly healthful and nutritious to cows, and serve as admirable food for store-hogs, suckling sows and their progeny.

MORUS ALBA OR WHITE MULBERRY SEED.

Sow your white Italian Mulberry seed in drills as early as you can get your ground ready this month. Your beds should be thoroughly manured, deeply dug, and well pulverized: keep the plants stirred and clean, and in dry weather water them twice or thrice a week, and always just before sundown.

GRASS.

The fields of artificial grasses of all kinds should have a bushel of plaster to the acre sown over them. A moist day, or very early in the morning, should be selected for so doing.

VETCHES OR SPRING TARES.

This is a species of the pulse or pea kind, and although but very little cultivated in this country, is greatly and deservedly prized in England, where every intelligent agriculturist has engrafted them into his system of husbandry. The mode of culture is regulated by the object intended to be gained. If seed be the object, they are invariably sown in drills. If for hay, or green food for soiling, they are put in broad cast. About one bushel to the acre in the former and three in the latter mode of culture. If intended to be ploughed in for manure, four bushels of seed is not too much. They will grow upon any well manured and tilled soil, and may be sown any time this month, though it may be prudent to say, the earlier the better: if sown at intervals of two weeks, during this month, they would come in as a happy succession to supply the lack of green food in the natural pastures in the heat of summer. In London green tares are as much sought after in bundles, as are clover and rye here. An acre will yield three tons of hay, which is very eagerly devoured by all kinds of stock. As a green crop to plough in, it is considered of great moment, and would prove a most valuable acquisition to be used as a substitute for lime and calcareous manures generally.

FLAX AND HEMP.

It is time that you had sown your flax and hemp seed.

Before we close our operations upon the farm, permit us in the singleness of our purpose to direct your attention to a branch of the business of the husbandman, which we fear has been too much neglected: we allude to the rearing and treatment of hogs.

Many farmers do not raise a sufficient number of these animals to serve the purposes of their respective households, and if you ask them why, they will probably tell you, "O, they are so troublesome, and then by the time that they are fatted each pound will cost you ten cents." Now these allegements may both be very true; but let us see what they are worth when submitted to the test of reason and argument. They are troublesome we freely admit, but we would ask what is to be done in this life without trouble! Are not all the acquisitions of man, whether intellectual or physical, achieved by labor? and why should he who obeys that injunction which comes to us sanctioned by the Source of all things, to get our bread by the sweat of our brows, expect to be exempt from trouble! Why trouble, in the sense here meant—is labor—which should be considered as the sweetening of life.

But let us admit that every pound of hog-meat does cost the raiser the sum named: and we would ask, what is gained by not raising any! Does he sell more corn or more roots by omitting to buy any? Is not the money which he has to lay out every fall for hog-meat so much lost! Now we maintain that the heay cost as alleged of raising pork arises altogether out of the imperfect system generally pursued in managing the hogs. They are turned loose in the woods to pick up a precarious living through the spring, summer and fall, and thus neglected, have but little size when they are put up for fattening, and generally speaking, when put up in the pen, are in addition to being small, so poor that they require a double quantity of corn to fatten them, and thus cost two or three prices in the raising.

Are we asked how we would manage them?—Yes. Then our reply is,—If we had a sufficient nnmber in family to require 20 hogs, we would lay off each year, 5 acres, to be divided in root and cabbage culture, we would pen our hogs altogether, and allot the tending upon them and the culture of these 5 acres to a faithful hand, and as the labor of one man would be competent to all the work required to be performed, we would see that he took good care of his trust. Thrice a day he should boil or steam their food, whether it were potatoes, cabbages, parsnips, carrots, beets, turneps, ruta baga, or mangel wurtzel: and indeed, if he were a fellow of energy and ambition, he would besides, be able to attend to the milch cows which should also have the advantage of boiled food.

By pursuing this system each hog would weigh as much as two of those which had been treated with the *luxuries* of the woods, and of course would cost much less, because being in fine, thriving condition on the arrival of the fattening season, they could be put in a state for killing with much less corn than those just taken from the range.

IN THE KITCHEN GARDEN.

For almost all the purposes of garden culture, unless the soil be a very tenacious and wet clay, *cow* manure is to be preferred. If your soil should be of this description, you will of course see the propriety of giving it well rolled horse manure mixed with leached ashes and the vegetable mould from the woods. In applying your manure do not forget that almost every species of garden vegetables require full feeding, and that as a general rule you cannot plant your spade or plough to deeply.

CAULIFLOWERS.

If your early *Cauliflower* plants have been properly brought forward in a forcing border, they are now fit for transplanting, and the sooner they are set out after the weather becomes settled the better. In taking up your plants be sure to let as much earth as you conveniently can remain attached to the roots, and in order to effect this, it would be best to water the plants freely in the bed before lifting them. Plant them down to the leaves; be sure to settle the earth well about the roots, and to form a slight hill around the plant with a hollow in the middle to catch and retain water, which should be occasionally given them in dry weather, until they are fit to be earthed up.

Cauliflowers cannot be raised in poor ground, and the proper soil for them is a deep, rich loam, which must always be backed with liberal portions of manure.

You should also, sow seed now to raise plants for cauliflowers to be earthed in October.

CABBAGES.

Transplant all sorts of early cabbage plants and sow seed for your winter ones.

After transplanting your plants, they should be carefully inspected every morning for some days. Whenever you discover that the grub-worms have been at work, which you can always tell by the plants being cut off, you must immediately search for and kill the enemy. You may generally find him ensconced about half an inch under the ground, two or three inches off from the stem of the plant. To kill them is the only way

to get rid of their ravages. A child of seven years old, can do this work as effectually as a grown person.

Borecole, turnep, cabbage, Scotch kale, Brussels sprouts, Jerusalem kale, broccoli, peas, beans, lettuce, radishes, small sallading, spinach, carrots, parsneps, beets, onions, tomatoes, egg plants, peppers, and indeed all other vegetables of the kitchen garden must be now sown, or planted.

CELLERY.

Transplant your cellery plants for an early crop. Prepare a spot of ground in beds three or four feet wide, manure and dig it up well, rake smooth; then plant the plants out, about three inches apart, and let them remain for about five weeks, when they will be fit to be put out in the trenches.

RHUBARB.

This delicious and declicate tart plant is too much neglected in our gardens, and we once more call the attention of every one to it who has a garden. It makes as good a tart as the gooseberry, is more healthful, and does not give half as much trouble.

The mode of culture is as follows:—Select a piece of rich sandy loam, manure it well; trench it two or three spades deep, level and rake it neatly, lay it off into beds of four feet depth, sow the seed in drills, thinly; keep the ground stirred, clean of weeds, and water well. The first winter they should be protected by a covering of rush or straw, with a plank thrown over it—after the first winter they will not require it.

In the second spring uncover your plants, hoe between the rows, lighten the earth and give a top dressing of rich mould or compost.

If you would enjoy this luxury at once, buy a few plants, say a dozen; they will be sufficient to supply your family with tarts. We would make this remark—no family where there are children should be without a few of these plants; besides, being a delicious ingredient in the composition of tarts, they are an antidote to the diarrhœa, dysentery, and cholera infantum.

IN THE FLOWER GARDEN.

As your early *hyacinths* will begin to develope their flowers this month, you must support their stems with small sticks, and to give effect to their appearance, it will be best to paint them green.

The same remark will apply to *tulips*, with this addition, that when the flowers are expanded they ought to be shaded in order to prolong their bloom and lend a freshness to their respective tints.

If the weather be dry, your *Ranunculuses* and *Anemones* should be watered.

When your Auriculas expand their flowers, if the weather be rainy, throw a protection over them, and water them often.

Sow your *Dahlia* seed, and the plants will be fit for transplanting by the middle of May.

Roses should now be transplanted and pruned.

Evergreen Shrubs and *vines* generally should be set out immediately.

Your Carnations and pinks should be shifted. Where they are in frames, they should be frequently aired and watered, so as to enure them to the transition they are soon to experience.

Your *Polyanthuses* and *Primroses* should be attended to now.

The *Jacobean lily* may be planted out towards the end of this month.

Your *walks*, *evergreen hedges*, *box edgings*, and *grass plats*, must all be attended to, and in fact your eyes and hands must be busy in every direction, if you design to have a garden of which you may be proud.

FRUIT GARDEN, &c.

Trees which have not burst into leaf may in all safety be planted during this month. After planting them they should receive a good watering which will answer for the two-fold purpose of settling the earth around the roots, and of causing them to push forth young and vigorous fibres; and we will here repeat what we have often advanced before, that many valuable trees are annually lost for the want of being watered,—what we mean by the term, is not a mere sprinkling of the surface, but thorough soaking applications of water in sufficient quantities to reach the roots.

The pruning of such of your fruit trees, as have not been before trimmed, may now be advantageously attended to.

Currants, raspberries, and gooseberries, may now be transplanted.

Attend to your strawberry beds; keep them clean of weeds, and clear away the runners as they may advance.

If you should want to make a new plantation of strawberry vines, let the strongest of the runners remain until June, when they may be taken off and transplanted.

Grape cuttings and vines may be planted out, if done early this month: and in a word, the eye and judgment of the judicious farmer, planter, or horticulturist, must be busy and actively employed in every direction on his premises, each must practice industry and economy, and exercise untiring vigilance, for without the exertion of these virtues, the best fields may prove unproductive, and loss and disappointment be his lot, when profit and pleasure should have rewarded his efforts.

The Farmer's Song.

Away with grandeur, pomp, and gold,
Away with childish ease;
Give me but strength my plough to hold,
And I'll find means to please.

'Tis sweet to toil for those we love—
My wife and darling boys;
Both tend to make my labor prove
The sweetness of my joys.

The sweetest morsel I procure,
When labor makes it sweet,
Is eaten with a taste more pure
Than meats that monarchs eat.

'Tis mine—yes, 'tis my happy lot,
From cares and av'rice free,
To own but this secluded cot,
True friends and liberty.

Thus I no monarch on his throne
Can grudge his destiny;
Let him his weight of cares bemoan,
Whilst I am truly free.

When labor wearies, and grows dull,
I take my book or gun:
Thus I the sweetest pleasure cull,
And thus all sorrow shun.

Now tell me, all ye gouty train,
Who have what fortune gives,
Is not the cheerful country swain,
The happiest man that lives?

Propagating the Peach.

1st. We gather the stones in the fall which we bury about an inch under ground, (high and early ground is preferred as the pits will sprout early in the spring,) spreading singly, but as closely as you can in order that the frost may have its full effect upon them. The best time for putting them in the ground is the last of October, but any time in October or November will do.

2d. *Preparing the ground for the young trees.*—Select a rich and middling dry piece of ground, which if very rich, will do without manuring, but if not, manuring is indispensable. Short and old manure is the best, and if some rich dirt be mixed therewith, I think it all the better. The manure should be spread along the furrows, which should be made with a plough four feet apart. If any other manure be added after, I would recommend lime or ashes. The ground should be ploughed as well as harrowed well in the first place.

3. *Transplanting.*—This should be done as soon as the pits begin to sprout in the spring, by dropping them in the rows already prepared for them about eight or nine inches apart and covered about an inch or more deep. Some nursery-men let the young sprouts grow six or eight inches high before they transplant them, but the former way I think the best. The young trees should be planted and hoed as often as necessary in order to keep them free from weeds and grass, say three or four times each, the last just before budding and not afterwards that season.

4th. *Budding.*—Select from the healthiest trees the scions of the kinds you wish to propagate, cut off the leaves and keep them in water, at least the butt ends, (those buds that have three leaves are the best.) They may be kept in this manner three or four days. Then take the scion in your hand, holding the butt end downwards, enter your knife about half an inch below the bud and cut upwards about a quarter of an inch above the bud, taking the wood with it, and then cut across the twig deep enough for the bud to come off; then with the point of your knife, take out the wood from the bud; then make a transverse cut in the stock to be budded, about three or four inches above the ground, (first trimming off the leaves and limbs about six inches above the ground;) from the middle of this cut make a slit about half an inch downwards, then with the point of your knife open the bark on each side of the slit, by the transverse cut; enter the lower end of the bud therein, bearing it down with your thumb and finger till the top side of the bud comes just below the first transverse cut, then with bark or yarn wind below and above the bud in order to keep close to the wood. In twelve or fourteen days the bandage may be removed. The time of budding may be from the 20th of August to the 20th September, perhaps later sometimes. In the following spring when the buds grow three or four inches long, the old stalks should be cut off about an inch above the bud. In the following fall or spring, you may set out your orchard, putting the trees about twenty feet apart. The ground should be rich and dry, not springy. Manuring is indispensable unless the ground be very rich.—Corn or potatoes may be planted among the trees, with benefit to them for three or four years.—*Hort. Register.*

Large Hogs.—Joseph Jennison of Southborough, Mass. has fatted and brought to Market this season, two hogs 18 months old, weighing 629 lbs. and 557 lbs., which he sold for 13 cents a pound, realizing the sum of $154,18. Pretty fair business this!

Anthony Hoffman of Pine Plains, killed on the 19th ult. a hog twenty-one months old, which weighed when dressed 891 lbs. and was sold for $100.

Brief Review of the Markets.

PHILADELPHIA, March 27—The Flour and Meal Market has for some days past been dull; the tendency of prices being downward. *Superfine Wheat Flour* is quoted at $10 per barrel. *Rye Flour* is scarce, and small sales have been made at $7 75 to $8 00 per barrel. Considerable sales of *Corn Meal* in barrels, at $4 00 to 4 50. GRAIN. *Foreign Wheat* is very dull of sale, and prices have declined. Sales of 500 bushels from store at $2 00 for fair quality; a large parcel having some smell, is offered at $1 85. A sale early in the last week, of 5000 bushels good quality western Wheat, deliverable after the opening of the Canals, at $2 20 per bushel. Good Domestic is wanted. *Rye*—Sales of 1500 bushels Delaware afloat at $1 40 per bushel; about 1000 Bremen, price not named, but at some decline on last week's rates. *Corn* is in request; sales of several parcels Southern afloat, 3,500 a 4000 bushels; White at 91 for inferior, and 93 for good quality; Yellow flat at 94 for only fair, and 95 a 96 cts. for good quality. *Oats*—Sales of three cargoes Southern, 3,000 bushels at 51 a 51½ cts. per bushel. HOPS have declined a fraction; small sales of first sort at 9¼ cents per pound. OILS—Linseed is arriving more freely, with a very limited demand; nominal price, $1 00. A sale in tierces early in the week at 99 cts. Some shipments have been made to a neighboring market. We have no changes to note in Sperm or Whale Oils. PROVISIONS—Sales of *Mess Beef* at $15 per barrel. Prime City Inspection $11 50 a $12. *Mess Pork*—$22 a 22 50; Prime, $17 to 18 50. Sales of 360 kegs *Western Lard*, No. 1, part at 11½ cts. 90 days, part 12 cts. for superior quality, 4 mos.; 1 a 200 kegs Jersey at 13½ cts. cash. Western *Bacon* is coming in freely, and prices have declined; sales at 11, since 10½ cts. for good quality assorted. RICE—Prices continue steady with a fair demand. A lot of 50 tcs. and 20 half do. sold at 4 cts. per lb. for good quality; sales 70 tcs. in lots, at 3¾ a 3 7-8 cts. SEEDS—The activity noted last week in *Cloverseed* has subsided, several large orders having been filled; and prices have declined for all kinds but strictly prime, which is much wanted. Sales of several lots 350 a 400 bushels, at $6 00 to $7 87½ for inferior old, to good new Seed. *Flaxseed*—Sales of several lots 5 a 600 bushels at $1 90 a 1 95 per bushel. WOOL—Large sales of superfine have been made at former prices; demand steady and prices firm. CATTLE MARKET—The supply offered for the last fortnight has been abundant. Beef Cattle were in good demand and all the supply were taken at $8 a $9 50 for fair to good quality; superior and extra, 9 50 a $10 per hundred. In Cows and Calves, a material decline has taken place, the sales varying from $16 to 35 per head, for fresh Cows with Calves. Hogs—Demand quite fair and quality generally good; the sale ranged from $8 50 to $9 25; extra, 9 50 per hundred. Sheep varied in price from $3 to $6 per head.

BALTIMORE, March 25—*Superfine Flour* we find quoted at $10 37½ cts. per barrel; Wagon price, $10; City Mills, dull of sale at $10. *Rye*, $7 to $7 25 per barrel. BACON—Hams, 17 to 18 cents per lb.; shoulders 15; assorted country 14; BUTTER, printed in pounds, 25 to 37½; roll butter 20 to 28 cents. EGGS, 18 to 25 cents per dozen. LARD 16 to 17 cents. GRASS SEEDS—*Red Clover* per bushel, $8 to 8 50; *Timothy* (herds of the north) $3 25 to $4 00; *Orchard* $2 75; *Fall Meadow Oats* $2 75; *Herds or Red Top* $1 25. HAY $20 per ton. *Hemp*, country dew rotted, per lb. 6 to 7 cents; water rotted 7 to 8; HOPS, first sort, 16. *Oats* 62 to 65 cents per bushel. RYE, per bushel $1 35 to 1 40. WHEAT, white and good $2 12 to 2 25. WOOL has not essentially changed from our former prices. Large quantities of foreign wheat have arrived at Baltimore during the past month.

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